DETAILED ACTION

Applicant's amendment and response are acknowledged. Primarily, Applicant has amended that the RNA binding protein is MS2CP.

Election/Restrictions

As stated in the restriction requirement under 35 U.S.C. 121 and 372, the groupings include, in accordance with 37 CFR 1.499:

I. Claims 1-6, drawn to a peptide inhibitor of the translation of proteins, characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1.

II. Claims 7-8 and 37, drawn to a fusion polypeptide specifically capable of inhibiting the translation of a target polynucleotide of interest, characterised in that said polypeptide comprises a peptide inhibitor of the translation of proteins, characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1 fused with an RNA binding protein.

III. Claims 9-17, and 29, drawn to a nucleic acid comprising a polynucleotide coding for a peptide inhibitor of the translation of proteins, characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1 or fusion polypeptide comprising the same OR a kit therefore OR a control system of the translation of a target polynucleotide of interest comprising a fusion polypeptide specifically inhibiting the translation of a target polynucleotide of interest, characterised in that said polypeptide comprises a peptide inhibitor of the translation of proteins,

characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1 fused with an RNA binding protein.

IV. Claims 18, 22-23, 31-33, and 38-40, drawn to a recombinant cloning or expression vector comprising a nucleic acid comprising a polynucleotide coding for a peptide inhibitor of the translation of proteins, characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1 or fusion polypeptide comprising the same OR a kit for the control thereof OR a control system comprising a recombinant expression vector comprising a nucleic acid of the translation of a target polynucleotide of interest comprising a fusion polypeptide specifically inhibiting the translation of a target polynucleotide of interest, characterised in that said polypeptide comprises a peptide inhibitor of the translation of proteins, characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1 fused with an RNA binding protein.

V. Claims 24-26, drawn to a prokaryotic or eukaryotic host cell comprising a nucleic acid of the translation of a target polynucleotide of interest comprising a fusion polypeptide specifically inhibiting the translation of a target polynucleotide of interest, characterised in that said polypeptide comprises a peptide inhibitor of the translation of proteins, characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1 fused with an RNA binding protein OR control system thereof.

VI. Claims 27-28, drawn to a method for the in vitro control of the translation of a target polynucleotide of interest comprising a fusion polypeptide specifically inhibiting the translation of a target polynucleotide of interest, characterised in that said polypeptide comprises a peptide inhibitor of the translation of proteins, characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1 fused with an RNA binding protein.

VII. Claims 34-36, drawn to a method for the control of the translation of a target polynucleotide of interest comprising providing a control system comprising a first nucliec acid and a second nucleic acid comprising a fusion polypeptide specifically inhibiting the translation of a target polynucleotide of interest, characterised in that said polypeptide comprises a peptide inhibitor of the translation of proteins, characterised in that its length is up to 250 amino acids and in that it comprises an amino acid sequence possessing at least 85% identity with the amino acid sequence of SEQ ID NO: 1 fused with an RNA binding protein.

Applicant's election of Group II, claims 7-8 and 37, as drawn to the elected peptides of SEQ ID NOS: 5-6, in the reply filed on 10/6/08, is acknowledged. Since the Examiner is willing to search/examine both SEQ ID NOS: 5-6, Applicant's only substantive argument for traversal (e.g. that these two peptides should be searched, and can be without an undue burden, which the Examiner concurs) is moot. Applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112 1st Written Description-Maintained

The rejection of claims 7, 37 and new claims 41-42 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, is maintained for the reasons of record. Applicant's arguments have been considered but are not found persuasive.

In an interview held on 10/7/10 with Bob Madsen, Applicant's Representative, the following was noted and is the substance behind the rejection being maintained:

The Examiner telephoned Applicant to discuss the lack of congruety (it appears) between the description of SEQ ID NOS; 5 and 6. Namely, the structure of each is supposed to be Fusion MS2CP-HA TAG-Pep58X or Pep58H, respectively (see Table 3, page 34). In reviewing SEQ ID NO: 5, it was found that resideus 1-2 and 12 do not correspond to anything. While residues 3-11 correspond to the HA Tag. Residues 13-40 correspond to the 28mer Pept58X (also recited in SEQ ID NO: 1). And it can only be assumed then that some portion or all of the remainder of the residues 41-189 correspond to MS2CP. However, since the structure of MS2CP was not found in the specification or listed by sequence, such cannot be known (a review of the literature found very different structural definitons/lengths of what MS2CP is). But even if some or all of these residues are MS2CP, the formula is incorrect as described earlier - where MS2CP is supposed to precede the HA Tag and then end with 58X.

As for SEQ ID NO: 6, neither the HA Tag or Pep58H (which assumedly corresponds to the 28mer SEQ ID NO: 1) could be found in that peptide and it is unclear what this peptide is?

Applicant's representative indicated he will review this with Applicant.

The Examiner indicated a Final Rejection will be send maintaining the rejection of record.

The rejection is repeated below for continuity of record:

This is a "written description" rejection, rather than an enablement rejection under 35 U.S.C. 112, first paragraph. Applicant is directed to the Guidelines for the Examination of

Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001.

Vas-Cath Inc. V. Mahurka, 19 USPQ2d 1111, states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention, for purposes of the "written description" inquiry, is *whatever is now claimed*" (see page 1117).

The claimed invention is primarily drawn to a **A fusion polypeptide specifically capable of inhibiting the translation of a target polynucleotide of interest, wherein said polypeptide is selected from the group consisting of SEQ ID NOS: 5-6, fused with an RNA binding protein (e.g. MS2CP, N, IRP and U1A; MS2CP)**.

One of skill in the art would not recognize from the disclosure that the Applicant was in possession of the claimed genus of any RNA binding protein, as capable of conjugation to the elected SEQ ID NOS: 5-6, in order to have possession of the "fusion peptides" as claimed. The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed" (see *Vas-Cath* at page 1116). Specifically, the specification was only found to generally discuss the 'concept' of the invention:

> [0105] According to another feature, the invention relates to fusion polypeptides capable of inhibiting specifically the translation of a target polynucleotide of interest to the corresponding protein, such a fusion polypeptide comprising a peptide inhibitor of the translation of proteins such as previously defined in the description, said peptide inhibitor being fused with an RNA binding protein specifically recognizing a target nucleotide site of the messenger RNA which is targeted.
>
> [0134] According to another feature, the invention relates to fusions between peptide and oligonucleotide capable of inhibiting specifically the translation of a target polynucleotide of interest into the corresponding protein. Such a fusion molecule comprising a peptide inhibitor of the

translation of proteins such as previously defined in the description, said peptide inhibitor being fused with an oligonucleotide specifically recognizing a target nucleotide site of an mRNA which is the target. **An example of this type of oligonucleotide is Aptastruc described in the PCT application N.sup.o PCT/FR 95/01036.**

[0158] As can be understood, the entire potentiality of the control system of the translation of proteins according to the invention is attained when the expression of the peptide inhibitor-RNA binding protein fusion polypeptide is inducible: thus, repression of the synthesis of the said fusion polypeptide will allow the translation of the target polynucleotide of interest into the corresponding protein, whereas activation of the expression of the fusion polypeptide will inhibit the translation of the target polynucleotide of interest into the corresponding protein.

The specification and Claim 8 only describe/claim (claim 8) 4 specific RNA binding proteins species: **MS2CP, N, IRP and U1A; MS2CP, being the single RNA binding peptide species, with no indication of overlapping sequence therein or generalizability as to an RNA binding protein that will carry out the invention or of reference to a genus list of such peptides (See specification p. 16, Table 1):**

Table 1 : Preferred binding proteins

Binding protein	Reference
MS2	J.Coller, N.Gray, M.Wickens, Genes Dev.12 (1998) 3226-3235. Witherell, G., J. Gott, and O. Uhlenbeck. 1991. Specific interaction between RNA phage coat proteins and RNA. *Prog. Nucleic Acids Res. Mol. Biol.* **40:** 185-220
N	E.De Gregorio, T.Preiss, M.W. Hentze, EMBO J.18 (1999) 4865-4874. Tan, R. & Frankel, A. D. (1994) *Biochemistry* **33**, 14579-14585
IRP	E.De Gregorio, J.Baron, T.Preiss, M.Hentze, RNA 7 (2001)106-113. Hentze MW; Kuhne LC. Proc Natl Acad Sci U S A. 1996 Aug 6;93(16):8175-82. Review. PMID: 8710843
U1A	A.S. Brodsky, P.A. Silver, RNA 6 (2000) 1737-1749.

The other section of the specification bearing the same include:

[0007] In order to test the biological activity of the different proteins capable of acting on the various post-transcriptional steps of the expression of the genes, i.e. on the different aspects of the metabolism of the messenger RNAs mentioned above, it has been suggested, in the state of the art, that the protein whose function is tested be fused with an RNA binding protein of known specificity, such as the protein MS2CP. The activity of the fusion protein (test protein-RNA binding protein) is tested on a DNA reporter construction coding for a messenger RNA comprising (i) the target nucleotide motif of the RNA binding protein and (ii) an open reading frame encoding a reporter protein, like luciferase or beta-globin (COLLER et al., 2002, PCT application N.sup.o WO 99/60.408).

[0023] FIG. 1 illustrates the mode of action of a fusion polypeptide according to the invention comprising the peptide inhibitor Pep58X fused with the RNA binding protein MS2CP. The fusion polypeptide is designated "MS2CP-Pep58X". In the lower part of the Figure, a target messenger RNA is shown comprising a target nucleotide motif of the RNA binding protein MS2CP, which has been designated "MS2" and which is shown in the Figure by a stem-loop structure and an expression cassette of the target protein of interest. As shown in the Figure, the fused protein MS2CP makes possible the binding of the

fusion polypeptide to the target messenger RNA at the level of the MS2 site, and this enables the peptide inhibitor Pep58X to exert its inhibitory biological activity specifically on the target messenger RNA.

[0024] FIG. 2 is a diagram showing the map of the plasmid pMS2CP-Pep58X. On the vector, "CMV" designates the promoter of the cauliflower mosaic virus which controls the expression of the open reading frame coding for the fusion polypeptide between the RNA binding protein MS2CP and the peptide inhibitor Pep58X. In the Figure, the open reading frame codes for a fusion polypeptide in which the protein MS2CP and the peptide inhibitor Pep58X are separated by the peptide HA (sequence "YPYDVPDYA" [SEQ ID N.sup.o11] extending from amino acid 98 to amino acid 106 of the protein hemaglutinin HA1), which constitutes a label for the detection and purification of the fusion polypeptide. "T7" designates the promoter of the phage T7, which makes possible RNA synthesis in vitro.

[0029] In the Figure, the bidirectional promoter CMV controls the expression of two open reading frames, (i) an open reading frame coding for luciferase R ("Luc R") and including a region 3'UTR containing eight copies of the nucleotide site MS2, a recognition site of the protein MS2CP and (ii) an open reading frame coding for the protein luciferase F ("LucF"), respectively.

[0106] In fact, it has been shown according to the invention that a fusion polypeptide between the peptide Pep58X of sequence SEQ ID N.sup.o 1 and the RNA binding protein MS2CP was capable of inhibiting specifically the translation of a messenger RNA comprising the target nucleotide site MS2 and an open reading frame coding for the marker protein luciferase, placed under the control of a suitable promoter.

[0107] As illustrated in FIG. 1, the protein MS2CP contained in the fusion polypeptide binds selectively to its target nucleotide site MS2, and this enables the peptide inhibitor Pep58X to specifically inhibit the expression of the messenger RNA or messenger RNAs containing the target nucleotide site MS2.

[0108] The same results have been reported by the applicant with a fusion polypeptide containing the peptide inhibitor Pep58H and the RNA binding protein MS2CP.

[0109] In a fusion polypeptide according to the invention, the RNA binding protein, which is fused with the peptide inhibitor of the translation of proteins defined above is selected preferably from MS2CP, N, IRP and U1A, listed in Table 1 below. TABLE-US-00001 TABLE 1 Preferred binding proteins

Binding protein Reference MS2 J. Coller, N. Gray, M. Wickens, Genes Dev. 12 (1998) 3226-3235. Witherell, G., J. Gott, and O. Uhlenbeck. 1991. Specific interaction between RNA phage coat proteins and RNA. Prog. Nucleic Acids Res. Mol. Biol. 40: 185-220 N E. De Gregorio, T. Preiss, M. W. Hentze, EMBO J. 18 (1999) 4865-4874. Tan, R. & Frankel, A. D. (1994) Biochemistry 33, 14579-14585 IRP E. De Gregorio, J. Baron, T. Preiss, M. Hentze, RNA 7 (2001)106-113. Hentze M W; Kuhne L C. Proc Natl Acad Sci USA. 1996 Aug. 6; 93(16): 8175-82. Review. PMID: 8710843 U1A A. S. Brodsky, P. A. Silver, RNA 6 (2000) 1737-1749.

[0120] Specific and illustrative examples of specific inhibitory fusion polypeptides according to the invention are constituted by: [0121] fusion polypeptide MS2CP-HA TAG-Pep58X of amino acid sequence SEQ ID NO: 5, which is encoded in the nucleic acid of sequence SEQ ID NO: 7. [0122] fusion polypeptide MS2CP-HA TAG-Pep58H of amino acid sequence SEQ ID NO: 6, which is encoded in the nucleic acid of sequence SEQ ID NO: 8.

[0124] The preferred nucleic acids according to the invention are the following: [0125] the nucleic acid of sequence SEQ ID NO: 7 coding for the fusion polypeptide MS2-HA TAG-Pep58X; [0126] the nucleic acid of sequence SEQ ID N.sup.o8 coding for the fusion polypeptide MS2CP-HA TAG-Pep58H.

[0175] A preferred vector comprising the nucleic acid containing (i) at least one copy of a target nucleotide sequence of the RNA binding protein contained in the specific inhibitory fusion polypeptide and (ii) the polynucleotide of interest, the control of the translation of which is desired is the vector pRLucLuc-CMVin+3'UTRGb (MS2)n, which is described in the examples.

Construction Protocol for the Recombinant Vectors MS2CP-Pep58X and MS2CP-Pep58H

[0231] The amplimers corresponding to Pep58X and Pep58H obtained by using as matrix respectively the plasmid pT7TSEDENBP (oligonucleotides ATGCTAGCGTAAAGTTCGCAGACACTCAGAAAG [SEQ ID N 12] and ATGCGGCCGCTGCATTGAGCTGCTGCATTTGC) [SEQ ID N.sup.o13] and the plasmid pT7TSCUGBP
(oligonucleotides ATGCTAGCGTAAAATTTGCTGATACACAGMG [SEQ ID N.sup.o14] and
ATGCGGCCGCTGCGCTGATTTGCTGCATCTGC [SEQ ID N.sup.o15])(Paillard, 2002) are digested with NheI and XhoI and inserted into the vector pMS2CP-HA digested beforehand with NheI and XhoI. The vector pMS2CP-HA was obtained by insertion of the tag HA (TACCCATACGATGTTCCAGATTACGCT [SEQ ID N.sup.o16]) into the vector
pcNMS2 (Lykke Andersen, Cell (103) 1121-31).

Functional Characterisation of the Specific Inhibitory Fusion Polyeptide MS2CP-Pep58X in Mammalian Cells Ex Vivo

[0241] The quantity of fusion proteins produced was evaluated by Western blot (anti HA polyclonal antibody, Santa Cruz Biotechnology) and standardised with respect to the quantity of a ubiquitous cell protein, the protein PCNA (Anti-Proliferating Cell Nuclear Antigen (PCNA) monoclonal antibody, Sigma Aldrich Company). The Luc F mRNA does not contain an MS2 site in its untranslated 3' part and should not be affected by the expression of MS2CP-Pep58X. In order to verify this, the expression of Luc F in the presence of MS2PC-Pep58X is analysed by the calculation d(LucF)/d (concentration of MS2CP-Pep58X).

[0242] The results are presented FIG. 7A. The slope of the straight line obtained is close to one (0.998), confirming that the fusion protein produced does not affect the expression of luciferase F. The expression of Luc F was then used as internal standard to estimate the effect of the fusion protein on the translation of Luc R mRNA. This latter contains, in fact, in its untranslated 3' part the MS2 sites permitting the binding of the protein MS2CP-Pep58X.

[0243] The results were analysed by the calculation d(R/F)/d(concentration of MS2CP-**Pep58X) (FIG. 7B).** The experiment was performed in parallel with MS2CP, the values obtained with MS2CP correspond to one hundred percent expression of Luc R.

[0245] The expression of MS2CP-Pep58X causes a repression of the translation of Luc R mRNA, the slope of the corresponding straight line is about -0.6 (FIG. 7B). The applicant has shown that the system of analysis also permits the study of proteins which stimulate translation (results not shown).
TABLE-US-00002 TABLE 2 Preferred systems of inducible regulation COMMERCIAL OR NAME PROMOTER INDUCER LITERATURE REFERENCE pMSG MMTV-LTR Dexamethasone Amersham
Pharmacia "(mouse mammary tumor virus") pOPRSVI/MCS RSV-LTR IPTG Stratagene (<< Rous sarcoma virus >>) pTet-Splice Tet Tetracycline Life Technologies pTRE hCMV-1 Tetracycline or Clontech doxycycline pRev-TRE hCMV-1 Tetracycline or Clontech doxycycline .sup.2pRetro-On hCMV-1 Tetracycline or Clontech pRetro-Off doxycycline pIND series .DELTA.HSP Ecdysone Invitrogen ("Heat shock protein") pPOP mPGK/lacO IPTG G. N. Hannan, S. A. Lehnert, (phosphoglycerate kinase) E. S. MacAvoy, P. A. Jennings and P. L. Molloy, An engineered PGK promoter and lac operator- repressor system for the regulation of gene expression in mammalian cells. Gene 130 (1993), pp. 233-239. pEF-LAC hEF-1.alpha./lacO IPTG Edamatsu, H., Kaziro, Y., and Itoh, H. (1997) Inducible

high level expression vector for mammalian cells, pEF-LAC carrying human elongation factor 1 .alpha. promoter and lac operator. Gene 187, 289-294. pBPVMT1 mMT-I (metallothionein I) Cd.sup.++, Zn.sup.++, PMA.sup.++ Pavlakis, G. N., and Hamer, D. H. (1983) Regulation of a metallothionein-growth hormone hybrid gene in bovine papilloma virus. Proc. Natl. Acad. Sci. USA 80, 397-401 pMT hMT-II (metallothionein II) Cd.sup.++, Zn.sup.++, PMA.sup.++ Friedman, J. S., Cofer, C. L., Anderson, C. L., Kushner, J. A., Gray, P. P., Chapman, G. E., Stuart, M. C., Lazarus, L., Shine, J., and Kushner, P. J. (1989) High expression in mammalian cells without amplification. Bio/Technology 7, 359-362 pMT302 hMT-IIA (mutant) Cd.sup.++, Zn.sup.++, Makarov, S. S., Jonat, C., PMA.sup.++ and Haskill, S. (1994) Hyperinductible human metallothionein promoter with a low level basal activity. Nucleic Acids Res. 22 1504-1505 pIPF hIFN-.alpha., (interferon .alpha.) Virus Mori, T., Yamamoto, K., Ohta, T., Sakamoto, C., Sato, M., Koide, K., Murakami, T., Fujii, M., Fukuda, S., and Kurimoto, M. (1994) A high level and regulatable production system for recombinant glycoproteins using a human interferon-.alpha. promoter-based expression vector. Gene 144 289-293 pGRE5 5XGRE/Ad2MLP Dexamethasone Mader, S., and White, J. H. "(glucocorticoid reponse (1993) A steroid-inductible element/adenovirus major promoter for the controlled late promoter") overexpression of cloned genes in eukaryotic cells. GRE5 "high affinity Dexamethasone S. Mader and J. H. White, A glucocorticoid reponse element steroid-inducible promoter for (GRE)/Adenovirus 2MLP" the controlled overexpression of cloned genes in eukaryotic cells. Proc. Natl. Acad. Sci. USA 90 (1993), pp. 5603-5607 0(12) 5603-7 pRDB "DRE/MMTV TTCD' . A. De Benedetti and R. E. (dioxin reponse element)" Rhoads, A novel BK virus-based episomal vector for expression of foreign genes in mammalian cells. Nucleic Acids Res. 19 (1991), pp. 1925-1931.

[0246] TABLE-US-00003 TABLE 3 SEQ ID N.degree. Designation Type 1 Pep58X aa peptide 2 Pep 58H aa peptide 3 EDEN-BP (aa84-155) peptide 4 CUG-BP (aa155-242) peptide 5 Fusion MS2CP-HA TAG-Pep58X peptide 6 Fusion MS2CP-HA TAG-Pep58H peptide 7 Fusion MS2-CP-HA TAG-Pep58X nucleic acid 8 Fusion MS2CP-HA TAG-Pep58H nucleic acid 9 EDENBP peptide 10 EDENBP nucleic acid 11 Peptide HA peptide 12 Primer nucleic acid 13 Primer nucleic acid 14 Primer nucleic acid 15 Primer nucleic acid 16 Peptide HA nucleic acid

8. Fusion polypeptide according to claim 7, characterised in that the RNA binding protein is selected from MS2CP, N, IRP and U1A.

Thus, neither the claims nor the specification adequately describe the claimed genus the "fusion polypeptide" (claims 7-8 and 37), because a specific **RNA binding protein** genus of

proteins has not been adequately described, beyond the **4 species of: MS2CP, N, IRP and UIA (claim 8),** as to what other RNA binding protein(s) Applicant held "possession" of at the time of the invention, as constituting the invention. With the substantial variability among the broad genus, contemplating any RNA binding protein, it is not clear as to which one or more of this assumedly broad genus, OR whether any other RNA binding proteins are even known? One of skill in the art would not recognize from the disclosure that the Applicant was in possession of such a genus, namely any "RNA binding protein" and thus any "fusion polypeptide" as claimed, other than the 4 RNA binding peptides capable of being bound to the elected SEQ ID NOS: 5-6 to create the claimed "fusion polypeptides" of the invention.

NOTE: The Examiner does not equally make an enablement rejection, as it is deemed that one ordinary skill in the art COULD find and conjugate, without undue experimentation, RNA binding proteins of interest in order to enable such a fusion protein, as claimed. The issue if that the present description is not found to adequately 'describe' the genus of any RNA binding protein(s) Applicant had "possession" of at the time of the invention, in order to carry out the invention as claimed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAURY AUDET whose telephone number is (571)272-0960. The examiner can normally be reached on M-Th. 7AM-5:30PM (10 Hrs.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MA, 5/7/2010

/Maury Audet/
Examiner, Art Unit 1654